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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,572	02/14/2002	Balu Jegannathan	EU2063866469IS	7495
21003	7590	12/11/2003	EXAMINER COLON, GERMAN	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			ART UNIT 2879	
			PAPER NUMBER	

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,572	JEGANATHAN ET AL.	
	Examiner	Art Unit	
	German Colón	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-32 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 5-14, 16-21 and 23-32 is/are rejected.
 7) ☒ Claim(s) 15 and 22 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The Amendment, filed on September 02, 2003, has been entered and acknowledged by the Examiner.
2. Cancellation of claims 1-4 has been entered.
3. Addition of claims 11-32 has been entered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 5 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamada et al. (EP 0 921 568).

Regarding claim 5, Kamada discloses a lamp including a plurality of light-emitting junctions 1 mounted to at least one curved conductor so as to adopt a three-dimensional array (see Col. 4, lines 34-36 and Col. 5, lines 29-32), wherein the at least one curved conductor has a curved conducting surface and the junctions are mounted to the curved conducting surface (see Fig. 1).

Regarding claim 27, Kamada discloses the at least one curved conductor being configured such that junctions are arranged substantially on an imaginary spheroid surface (see Fig. 1). The Examiner notes that the junctions are arranged on a lower and inner side of an imaginary surface which radius is above the junctions.

6. Claims 5, 9, 10 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Roberts et al. (US 6,521,916).

Regarding claim 5, Roberts discloses a lamp including a plurality of light-emitting junctions **35a, 35b** mounted to at least one curved conductor so as to adopt a three-dimensional array **36**, wherein the at least one curved conductor has a curved conducting surface and the junctions are mounted to the curved conducting surface (see Fig. 11).

Regarding claim 9, Roberts discloses the lamp including a globe portion **12**, with the junctions and the at least one curved conductor being embedded within the globe portion so that the lamp is formed as a unitary structure.

Referring to claim 10, Roberts discloses a lens **30** adapted to fit with the globe portion, and configured to shape the light emitted from the globe portion into a predetermined pattern.

Referring to claim 27, Roberts discloses the at least one curved conductor being configured such that junctions are arranged substantially on an imaginary spheroid surface (see Fig. 1). The Examiner notes that the junctions are arranged on a lower and inner side of an imaginary surface which radius is above the junctions.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6-8, 12-14, 16, 17, 19-21, 23, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamada et al. (EP 0 921 568) in view of Nagasawa (US 4,255,688).

Regarding claim 6, Kamada discloses a lamp including a plurality of light-emitting junctions 1 mounted to at least one curved conductor so as to adopt a three-dimensional array (see Col. 4, lines 34-36 and Col. 5, lines 29-32). Kamada is silent regarding the limitation of "the at least one curved conductor comprises recesses for receipt of respective ones of the junctions".

However, in the same field of endeavor, Nagasawa discloses a light-emitting junction mounted to a conductor, wherein the conductor comprises a recess with the purpose of improving the appearance of the LED, reflecting in substantially one direction the light radially emitted by the light-emitting junction, while providing an LED of reduced size and excellent visibility (see Col. 1, lines 11-13, 55-57 and 65-66, and Col. 3, lines 36-38). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide recesses to the curved conductor of Kamada, in order to improve the appearance of the LED, reflecting in substantially one direction the light radially emitted by the light-emitting junction, while providing an LED of reduced size and excellent visibility.

Regarding claim 7, Kamada-Nagasawa discloses the at least one curved conductor being configured such that junctions are arranged substantially on an imaginary spheroid surface (see Fig. 1 of EP '568). The Examiner notes that the junctions are arranged on a lower and inner side of an imaginary surface which radius is above the junctions.

Referring to claim 8, Kamada-Nagasawa discloses the recess having side walls which function as an optical guide for controlling at least one of the direction of light transmission and the angle of divergence (see at least Fig. 4, of '688).

Referring to claim 12, Kamada-Nagasawa discloses the at least one curved conductor having a curved conducting surface and the recesses are formed therein.

Referring to claim 13, Kamada-Nagasawa discloses the lamp comprising a plurality of curved conductors (see Fig. 1 of EP '568).

Referring to claim 14, Kamada-Nagasawa discloses the lamp comprising at least three curved conductors (see Fig. 1 of EP '568).

Referring to claims 16 and 17, Kamada-Nagasawa discloses the junctions being electrically connected to the at least one curved conductor and to an adjacent curved conductor (see Fig. 1 of EP '568).

Regarding claims 19-21, claims 19, 20 and 21 are rejected over the reasons stated in the rejection of claims 6, 13 and 14, respectively.

Regarding claims 23 and 24, claims 23 and 24 are rejected over the reasons stated in the rejection of claims 16 and 17, respectively.

Referring to claim 26, Kamada-Nagasawa discloses the recess having side walls which function as an optical guide for controlling at least one of the direction of light transmission and the angle of divergence (see at least Fig. 4, of '688).

9. Claims 6-8, 11, 12, 16, 19, 23, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6,521,916) in view of Nagasawa (US 4,255,688).

Regarding claim 6, Roberts discloses a lamp including a plurality of light-emitting junctions **35a,35b** mounted to at least one curved conductor **36** so as to adopt a three-dimensional array (see Fig. 11). Roberts is silent regarding the limitation of "the at least one curved conductor comprises recesses for receipt of respective ones of the junctions".

However, in the same field of endeavor, Nagasawa discloses a light-emitting junction mounted to a conductor, wherein the conductor comprises a recess with the purpose of improving the appearance of the LED, reflecting in substantially one direction the light radially emitted by the light-emitting junction, while providing an LED of reduced size and excellent visibility (see Col. 1, lines 11-13, 55-57 and 65-66, and Col. 3, lines 36-38). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide recesses to the curved conductor of Roberts, in order to improve the appearance of the LED, reflecting in substantially one direction the light radially emitted by the light-emitting junction, while providing an LED of reduced size and excellent visibility.

Regarding claim 7, Roberts-Nagasawa discloses the at least one curved conductor being configured such that junctions are arranged substantially on an imaginary spheroid surface (see

Fig. 11 of '916). The Examiner notes that the junctions are arranged on a lower and inner side of an imaginary surface which radius is above the junctions.

Regarding claim 8, Roberts-Nagasawa discloses the recess having side walls which function as an optical guide for controlling at least one of the direction of light transmission and the angle of divergence (see at least Fig. 4, of '688).

Regarding claim 11, Roberts-Nagasawa discloses the lamp including a globe portion **12**, with the junctions and the at least one curved conductor being embedded within the globe portion so that the lamp is formed as a unitary structure.

Referring to claim 12, Roberts-Nagasawa discloses the at least one curved conductor having a curved conducting surface and the recesses are formed therein.

Referring to claim 16, Roberts-Nagasawa discloses the junctions being electrically connected to the at least one curved conductor **36** and to an adjacent conductor **16a**.

Referring to claims 19 and 23, claims 19 and 23 are rejected over the reasons stated in the rejection of claims 6 and 16, respectively.

Referring to claim 26, Roberts-Nagasawa discloses the recess having side walls which function as an optical guide for controlling at least one of the direction of light transmission and the angle of divergence (see at least Fig. 4, of '688).

Regarding claim 28, Roberts-Nagasawa discloses the lamp including a lens **30** adapted to fit with the globe portion, and configured to shape the light emitted from the globe portion into a predetermined pattern.

10. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6,521,916) in view of Chen (US 5,962,971).

Regarding claim 29, Roberts discloses the claimed invention except for the limitation of “the junctions having a common layer of fluorescent material arranged thereover”.

However, in the same field of endeavor, Chen discloses an LED having a fluorescent material arranged over a light-emitting junction with the purpose of generating white light of good color quality, which is uniformly distributed with a wider projection angle, and wherein the differences in color emission between different devices are reduced (see Col. 1, lines 24-27 and 49-55). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a fluorescent material arranged over the light-emitting junctions in order to generate white light of good color quality, which is uniformly distributed with a wider projection angle, and wherein the differences in color emission between different devices are reduced.

Referring to claim 30, claim 30 is rejected over the reasons stated in the rejection of claim 29.

11. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts-Nagasawa as applied to claim 6 above, and further in view of Chen (US 5,962,971).

Referring to claim 31, Roberts-Nagasawa discloses the claimed invention except for the limitation of “the junctions having a common layer of fluorescent material arranged thereover”.

However, in the same field of endeavor, Chen discloses an LED having a fluorescent material arranged over a light-emitting junction with the purpose of generating white light of

good color quality, which is uniformly distributed with a wider projection angle, and wherein the differences in color emission between different devices are reduced (see Col. 1, lines 24-27 and 49-55). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a fluorescent material arranged over the light-emitting junctions in order to generate white light of good color quality, which is uniformly distributed with a wider projection angle, and wherein the differences in color emission between different devices are reduced.

Referring to claim 32, claim 32 is rejected over the reasons stated in the rejection of claim 31.

12. Claims 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamada-Nagasawa as applied to claims 17 and 24 above, and further in view of Roberts et al. (US 6,521,916).

Regarding claim 18, Kamada-Nagasawa discloses the junctions being electrically connected but is silent regarding the limitation of “the junctions being electrically connected in series”.

However, in the same field of endeavor, Roberts discloses a plurality of light-emitting junctions being electrically connected and teaches that said junctions may be connected in series or parallel (see Col. 18, lines 66-67). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect in series the electrically-connected junctions disclosed by Kamada-Nagasawa, since Roberts teaches the junctions may be connected in such an array. Further, it is within the general skill of an artisan to select a known electrical

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connection on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claim 25, claim 25 is rejected over the reasons stated in the rejection of claim 18.

Allowable Subject Matter

13. Claims 15 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 15 and 22, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claims 15 and 22, and specifically comprising the limitation of "the lamp comprising at least two recesses being formed in each of the plurality of curved conductors".

Response to Arguments

15. Applicant's arguments with respect to claims 4-10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 703-305-5987. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


gc


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